WELFARE, CHILD SUPPORT, AND LABOR MARKETS: ARE THEY RELATED TO FATHER INVOLVEMENT?

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Introduction

This chapter assumes that greater investment of fathers' time and money in their children positively effects child wellbeing. Economic theory predicts that marriage promotes father-child involvement. Theory also predicts that welfare and child support policies and labor market conditions effect marriage. Thus, the chapter reviews the economic literature on the effects of welfare, child support enforcement, and labor markets on father non-involvement with their children due to divorce, separation, and nonmarital births. We begin with an overview of the massive changes in household structure that have taken place in the past decades and the theoretical rationale for why household structure is related to father involvement. In subsequent sections on the effects of welfare, child support and labor markets on marriage, we first explicate the predictions of economic theory and then examine the empirical evidence for and against the predictions of economic theory. The magnitude and the significance of relationships can provide information about whether policy tools can effectively manipulate family structures, and in the process, perhaps influence levels of father involvement and child wellbeing.

Trends and Consequences

Family patterns have changed dramatically since the 1960s when the majority of all births occurred within marriage and most children could expect to be living in a household with both of their biological parents. Since that time, rates of female headship have increased steadily due to both divorce and nonmarital childbearing. Divorce rates began to rise steadily from the 1960s, and in less than 20 years, more than tripled.

Although divorce rates declined somewhat after 1979 (Moffitt, 1992), estimates using

1985 Current Population Survey data suggest that between one-half and two-thirds of all marriages end in divorce. Rates of nonmarital childbearing, the other major source of changes in family structure, have also shown tremendous increases over the last 25 years. Between 1965 and 1997, the ratio of nonmarital births to total births increased from 8 percent (24 percent for black Americans and 3.1 percent for white Americans) to over 30 percent (69 percent for black Americans and 25.4 percent for white Americans) in the United States.

From a policy perspective, the increase in single-parent, predominantly femaleheaded, households merits careful consideration. Single-parent households are more often impoverished, and the children raised within them do not fare as well as children who are brought up by both biological parents. But the decline in the two-parent family is not just a matter of greater female autonomy and income combined with an increased social acceptance of single mothers. It is also likely to be a story of men's retreat from the responsibilities and the rewards of parenting. A study of changes in household structure between 1960 and 1980 estimated that men between the ages of 20 and 40 were spending 15% less of their lifetimes married and co-resident with children. As Goldschieder and Kaufman (1996) point out however, this study does not differentiate between co-residence with own and non-biological children. If men have less of a parental relationship with non-biological children and non-resident own children, the number of years of active involvement would have likely seen a far greater decrease than years of co-residence. This last issue is extremely important because if mothers are unable to fill this parenting gap, it is likely that children are going to suffer as a result.

There are many reasons to believe that marriage or a marriage like relationship promotes greater father investments of both time and money in their children. First of all, co-resident fathers are able to spend more time with their children than most non-resident fathers. If involvement is a function of time spent together and not just time spent actively or exclusively parenting, fathers who do not live with their children are necessarily going to be less involved. From an economic perspective, this is because non-resident fathers have to use a greater level of resources to spend time with their children. Time spent with children can be priced at the opportunity cost of the father's time. More often for resident than for non-resident fathers, the opportunity cost of spending time with the child will be near zero because time spent with the child amounts to passive involvement. The child will be present when the father is engaging in normal every day activities, such as showering, shaving, getting dressed, eating breakfast, and eating dinner. The cost might not be exactly zero because the child may divert the father's attention away from accomplishing tasks. On the other hand, to the extent that the father enjoys the child's company, the costs could actually be negative—that is a benefit. The point is that just being present is an important part of parenting in which non-resident fathers do not engage except, perhaps, during visitation periods when the child lives with them. To spend time with their children, non-resident fathers also incur additional costs because they have to make arrangements to visit (which may include fairly high emotional costs depending on the relationship with the child's mother), incur travel expenses, and sometimes arrange a venue for the visit to take place. All these factors increase the cost of temporal involvement and result in a lower level of involvement for non-resident fathers.

Similar arguments apply to non-resident fathers' financial involvement, and their well-documented reluctance to provide child support. First of all, co-resident fathers can provide more for their children because co-residence allows for shared consumption of many goods. Housing is a good example of such a public good. Non-resident fathers privately consume many items – like housing -- that would otherwise be collective goods, jointly consumed by the entire household, and the result is less money available to spend on the child. Both Willis and Weiss (1985) and Willis and Haaga (1996) discuss an additional explanation which focuses on the relationship between divorced or never married parents. They point out that nonresident fathers who care about their children can enjoy the benefits of the investments that women make in their children even when they do not contribute. If, in the absence of child support, the mother will provide for the child, the father can enjoy the benefits of her investment and reallocate what he would have spent on the child towards his own consumption. A related issue is the fact that as women's incomes increase – either by higher wages or more generous forms of public assistance – a father's optimum transfer should go down. Furthermore, they posit that any cost-sharing agreement between the two separated parents is not likely to be selfenforcing because they will each have an incentive to raise their own consumption and let the other parent bear the burden of support.²

One further argument is discussed in Willis and Weiss (1986) and Del-Boca and Flinn (1995). These authors point out that child support is paid by the father to the mother, and it is the mother who decides how to spend the money. When the mother treats child support income as her own income, she is effectively taxing a man's child support contributions. For instance, suppose the mother spends 50% of her child support

income on herself, and 50% on the child. The father will have to pay \$2 in child support in order to see the impact of a \$1 investment in the child, and this tax will cause the man to offer less child support than he otherwise might.

Taken together these explanations provide convincing support for our assumption that children benefit from the highest level of father involvement when they live in households with both biological parents. Nonresidency – resulting from either divorce, separation, or nonmarriage -- reduces the amount of time and money a father makes available for his children.

Economic Theory of Family Formation

According to economic theories of marriage and divorce (Becker 1973, 1974, 1981), individuals decide to marry because they expect they will be better off inside of marriage than outside of it. When deciding whether or not to divorce or separate, each individual compares the expected happiness from remaining together to that of becoming single again and possibly remarrying. Divorces occur because people were initially uncertain about the quality of the match (Becker et al, 1977). As new information comes, marital happiness or expected happiness outside of marriage may change, and people may decide they want to dissolve the relationship. Increases in expected happiness outside of marriage that leave marital happiness unaltered increase the probability of divorce and non-marriage or non-marital births.³ Divorce or non-marriage occurs when the sum total of utility to both partners of being unmarried exceeds the total utility of being in the partnership. In all other cases, the partners should be able to divide the marital happiness in such a way that both partners can be made better off by remaining together.⁴ Although the application of economic theory is sometimes criticized for

ignoring the complexity of human motives and behaviors, the predictions of economic theory do not require that all individuals act rationally all the time. So long as some individuals on the margin of choice, weigh their options some of the time, the predictions will hold.

The Impact of Welfare

Theoretical Predictions

Utilizing this basic model of family formation, we can explore the effects of welfare on divorce and nonmarital births. The impact of welfare programs on marriage depends upon the rules of the program. Programs, like the old Aid to Families with Dependent Children (AFDC) program, that provide benefits only to (or primarily to) unmarried parents will decrease marriage because they increase the mother's wellbeing outside marriage but provide no increase within marriage. Programs that provide benefits to married as well as to unmarried parents could either increase or decrease marriage depending upon the gains available to the parents inside and outside marriage. Though the Temporary Assistance to Needy Families (TANF) program appears to be more available to married couples than the old AFDC program and should therefore do less to discourage marriage, most state TANF programs, like AFDC before them, reduce welfare benefits by one dollar for each dollar the father earns. Welfare programs with such steep income tests increase the wellbeing of mothers outside marriage more than they increase wellbeing inside marriage.

While program eligibility requirements and income tests have discouraged marriage, they may have created an incentive for women to cohabit, at least in more recent years. Early on, many states withdrew benefits if it was discovered that a welfare

recipient was living with an unrelated man. Officials would sometimes conduct surprise bedroom checks and other types of searches in order to establish that a welfare recipient was not cohabiting. After these "man in the house" laws were deemed unconstitutional, eligibility rules became more similar to those applied to married women. Nevertheless, it is easier to hide a cohabiting partner than a spouse, so it is possible that the stringency of the income testing created an incentive for women to cohabit rather than marry because it was easier for them to hide the income contributions and the existence of a more unofficial partner.

Given the rules surrounding welfare provision, economic theory implies that restrictions in welfare should reduce divorces by reducing the attractiveness of life outside of marriage, but only among those women likely to require assistance. When other alternatives dominate the welfare option, there should be no change in a woman's happiness outside of marriage⁵ and, consequently, no change in the likelihood of divorce among those women. While theory implies that more restrictive welfare policies would result in more resident fathers and increased involvement, it also implies that within the marriages of would-be recipients, restrictions in welfare should also result in a renegotiation of marital payoffs in favor of the husband⁶. If women prioritize the wellbeing of children to a greater extent than men, this shift in bargaining power could have important countervailing effects that need to be considered.

Within this simple framework, the current marital status of the decisionmaker is irrelevant. Both divorce and nonmarital childbearing can be thought of as decisions to opt out of marriage. In both instances, women simply compare their wellbeing within marriage to their wellbeing outside of marriage. A married woman who wants to obtain a

divorce is making the same sort of choice that an unmarried, pregnant woman is making when she chooses to have a nonmarital birth. She is simply deciding that the single state is superior to the married one. Consequently, as outlined above in the case of divorce, economic theory predicts that restrictions in AFDC/TANF should encourage marriage and reduce non-marital births among would-be welfare recipients.

Empirical Evidence for Welfare Effects

While there are many studies that look at the relationship between female headship and welfare generosity, the dependent variable frequently groups together all routes into female headship and therefore does little to differentiate the variety of paths followed into female headship and father absence. Because our interest in this chapter involves an examination of the impact of policy variables on each of the different routes to lone parenthood, studies that do not distinguish between outcomes are not considered in the following sections. Interested readers can refer to Garfinkel and McLanahan (1986) or Moffitt (1992, 1998) for very thorough literature reviews on the relationship between welfare and all types of household structure. These reviews report mixed results. Most studies find small or no effects. Some even report counterintuitive results implying that high welfare benefits are associated with lower rates of female headship. All the reviews recognize, however, that the relationship, although small, appears to have strengthened over time due to either improved study designs or changing underlying behavior.

Before turning to more sophisticated statistical studies, it is perhaps instructive to look at more aggregate data to see if the relationships between changes in welfare generosity over time appear to explain the increases in divorce and nonmarital

childbearing that have occurred in recent decades. Total welfare benefit levels began to increase during the mid-1950s, increased very rapidly in the decade following the War on Poverty in 1964, then fell from 1975 to 1988 and have leveled off or risen slightly since then. Rates of female headship began increasing in the mid-1960s and have continued to increase since that time. While both female headedness and welfare benefits began to increase at the same time, if there were an underlying causal relationship, it is unclear why the fall in benefits did not cause a decline in female-headed households in the 1970s and 80s. Given the divergence of the trends, it would appear that other forces are dominating any welfare effects. Moffitt (2001) shows that among lower educated individuals, decreases in male wages and to a lesser extent, increases in female wages during this period should have led to a larger increase in female-headship than actually occurred. Thus the decline in welfare benefits may have restrained divorce and non-marital child-bearing after all.

Cross sectional studies do not compare trends but seek to utilize differences across space – differences in welfare generosity across states at a single point in time.

These types of studies are meant to hold everything else fixed at one point in time and determine how a change in welfare benefits in one place – changing Michigan's levels of welfare to those of Alabama's, for instance -- would change behavior there. The majority of studies on the effects of welfare have been of this type (Moffitt, 1998).

An important issue in these types of studies involves the fact that states differ, often dramatically from one another, and these potentially unmeasured differences may be reflected in varying levels of welfare generosity as well as varying levels of divorce and nonmarital births (Pitt, Rosenzweig, and Gibbons, 1993; Rosenzweig, 1999). For

instance, those states with more liberal welfare policies may also be states with more liberal attitudes towards nontraditional family types. It is possible that states may have responded to liberal attitudes by increasing welfare generosity. If this were the case, we would find high rates of female headedness in states with higher welfare benefits even if women were not responding to levels of generosity. Differences in attitudes across states would be responsible. It is also possible that state policies regarding welfare can respond to as well as result in observed outcomes. States that have a large number of unwed mothers may have lower benefits because they could not afford to maintain them at previous levels. If this is the case, it might appear that low benefit levels "cause" higher rates of divorce or lone parenthood when, in fact, the causation has run in the opposite direction. Either of these types of spurious correlation is potentially problematic. When efforts to control for this kind of spurious correlation weaken estimated relationships in otherwise similar models, there is reason to suspect that parameter estimates may be biased by unobserved differences across states.

Compared to the vast literature on nonmarital childbearing, and general female headship, there are not a great deal of empirical studies in economics that focus on the relationship between welfare generosity and divorce. Across studies, the results generally demonstrate some relationship between AFDC benefits and divorce, but there is a good deal of variation in the way that benefits are measured and some variation in results when the models are estimated separately by race. The typical AFDC measure is the guarantee for a family of two or four, although one study by Hoffman and Duncan (1995) finds that a 5-year moving average is a better measure than the more typical AFDC guarantee at one point in time. This is perhaps because, as Rosenzweig (1999)

points out, women may not respond to small temporal changes as much as to an expected benefit profile – the amount they expect to receive over some period of time. In general, most individual-level studies indicate, consistent with the predictions outlined above, that higher state levels of AFDC are associated with higher levels of divorce (Ellwood and Bane, 1985; Hoffman and Duncan, 1995; Nixon 1997) – but the size of the effect varies considerably across studies. For instance, Hoffman and Duncan (1995) find that a 25% increase in welfare benefits results in a less than a one percentage point change in the risk of divorce over fifteen years. Using a different model and earlier data set, Ellwood and Bane (1985) estimate that a \$100 increase in welfare benefits would increase the probability of divorce by 0.10 on average, with the strongest effects among younger, nonwhite samples. Estimated relationships generally strengthen when attempts are made to control for state specific unobservables or the likelihood of AFDC receipt in the event of a divorce. In contrast to the studies mentioned above which look at the probability that a particular individual with a particular group of characteristics obtains a divorce, models estimated on state level data often yield imprecise and even anomalous relationships. These types of models relate state level outcomes – the percentage of people currently divorced in each state, for instance – to the characteristics of the state populations. In these more aggregate studies, real welfare effects among individuals within the state populations may have been lost simply because welfare recipients are a minority of all women in each state.

As noted in previous literature reviews, the results from studies that assess the impact of AFDC benefits on nonmarital births yield somewhat mixed results with earlier studies showing weaker, less significant relationships than later studies (Moffitt, 1992).

Parameter estimates presented in more recent studies, however, tend to be small in magnitude even when they are significant. While there is surprisingly little agreement across studies, some interesting generalities do emerge. Dividing the studies into those that utilize pre-1978 data and post-1978 data, it becomes obvious that earlier studies, those that, with the exception of one (Cutright, 1970), cover time periods from the 1960s up to the mid-1970s, were rarely carried out at an individual level. In fact, only one study (Ellwood & Bane, 1985), in part, considers individual level data. State level nonmarital birth rates were, by far, the most popular choice of dependent variable, although one study (Freshnock & Cutright, 1979) examines county level data, and another (Janowitz, 1976) considers MSMAs with populations over 250,000. The parameter estimates reported from these studies are usually small and sometimes imply that higher levels of AFDC are associated with lower rather than higher rates of nonmarital childbearing – a result entirely at odds with theoretical predictions. Where positive relationships between AFDC generosity and nonmarital births do emerge, they tend to do so after the 1960s and to be more consistently identified for young, adult white women.⁸ In the pre-1978 data, there appears to be only a very slight association between AFDC and nonmarital births for teenagers in general (Ellwood & Bane, 1985; Freshnock and Cutright, 1979).

In more recent studies, only two (Case, 1998; Garfinkel et al, 2000) use aggregate measures; most carry out individual level, analyses. Similar to earlier studies, the aggregate level analyses fail to find a robust relationship between measures of AFDC generosity and nonmarital births at a state level. Whether it is due to the different level of analysis or to underlying changes in behavior and attitudes over time, it is apparent that

more recent studies are more likely to find that teenage pregnancies are associated with welfare generosity, especially among whites (Lundberg and Plotnick, 1990, 1995; Plotnick, 1989; 1990). While the relationships are more consistently in the anticipated direction (higher levels of welfare imply higher rates of nonmarital births), the size of the effect remains rather small. Lundberg and Plotnick (1990) report that a 25% increase in benefits increases the proportion of teenagers with a nonmarital birth by only 0.8 percentage points. Using a model that considers several marital status/fertility choices, Rosenzweig (1999) shows that compared to having no birth, average AFDC benefit levels⁹ are positively related to nonmarital births for both teenagers and young adults. Moreover, when the model is estimated using samples of low-income (as measured by parental income) women, his is one of the few studies in which the results strengthen¹⁰. In his model, a 37% increase in the expected stream of welfare benefits increases the proportion with a nonmarital birth by three percentage points for the full sample and nearly seven points for the low income sub-sample – much larger than the results reported in previous papers. Replicating Rosezweig's results using a different dataset, however, Hoffman and Foster (2000) found that these results were driven by the inclusion of women in their early 20s and were not robust to the specification of controls for state-level unobservables.

Finally, in those studies using data that span both the pre- and post- 1978 periods, annual aggregates do not result in very strong relationships (Murray, 1993). Those studies often cover time periods in which the data are more heavily weighted towards the 1960s and 1970s. Similar to the early studies, where relationships are consistent with theoretical predictions, they are less likely to yield large relationships for teenagers,

particularly black teenagers (An et al, 1993; Duncan and Hoffman, 1990). Using a very careful modeling approach, An et al (1993) report that a 20% increase in welfare benefits would increase the proportion of women with a nonmarital birth by 2 percentage points but the coefficient shrinks when the model is estimated on a black sub-sample. Duncan and Hoffman (1990) estimate their model on a sample of black teenagers and find similarly small effects of AFDC generosity on nonmarital teenage births.

Taken together, the results from these studies of welfare benefits and nonmarital births seem to be consistent with economic theory in that welfare restrictions appear most often to decrease the likelihood of nonmarital births. Although the estimated effects have strengthened over time, some questions linger. The hypothesis that effects should be strongest among those women most likely to require AFDC assistance receives inconsistent support among existing studies -- often coefficient estimates from subsamples likely to require assistance are smaller than estimates which rely on the whole sample. Moreover, the inclusion of state fixed effects, an attempt to control of unobserved differences across states, frequently tends to mitigate the relationship between welfare and nonmarital births indicating that the measured "effects" may be capturing, in part, differences in states that are not due to welfare generosity but some unmeasured, third variable. These issues make the hypothesized relationship between welfare benefits and nonmarital births the most weakly supported by existing evidence, particularly for teenaged subsamples.

The Impact of Child Support Enforcement

Theoretical Predictions

Increased child support enforcement should also have an impact on family formation. Increases in child support payments reduce the well-being of non-resident fathers (eighty five percent of non-resident parents are fathers) and increase the well being of custodial mothers outside of marriage. Because stronger enforcement has opposite effects for mothers and fathers, the net effect on divorce is unclear. There are three possibilities. The first possibility is that changes in the expectation of happiness outside of marriage change such that the increases in mothers' well-being and decreases in fathers' well-being which result from stronger child support enforcement are exactly equal. In this case the total value of happiness (the sum of the husband's and the wife's utility) within and outside of marriage remain unchanged, and there are neither more nor less divorces than before the increased child support provision. The second possibility is that stronger enforcement increases the mother's expected well-being more than it decreases the father's expected well-being outside of marriage. In this case, the total relative value of non-marriage to marriage increases, which leads to more divorce. The third possibility is that increased child support enforcement makes men more worse off than their partners are made better off outside of marriage. In this case, increases in the expected amount of child support transferred lead to fewer divorces In any of these situations, because increased child support means that men will be made worse off (and women better off) if they are unmarried, we would expect a renegotiation of the payoffs within marriage in order to compensate women who would otherwise want a divorce because of changes in their expected happiness outside of marriage.

Which possibility best matches reality? The answer differs depending upon whether the mother would expect to rely on welfare if she were to become (or remain) unmarried. Because in most states, AFDC/TANF recipients receive only the first \$50 of child support¹¹, the most likely scenario for those couples in which the woman is likely to end up relying on welfare is that the father loses more than the mother gains from strengthened child support enforcement. ¹² For those couples in which the woman will not end up relying on welfare if she divorces, either the second or the third scenario is possible. Following a divorce, women are usually worse off financially and men are usually better off financially. Thus the wife is likely to place a higher value on the increase in her income than he places on the decrease in his income. ¹³ On the other hand, the stricter child support enforcement is, the more likely that non-resident fathers will be required to pay more than they would freely choose to provide, and the greater the probability that he places a higher value on his income loss than the mothers place on their income gain. Having to pay what they perceive to be too much child support might introduce some added level of disutility – the emotional cost resulting from resentment at what fathers think is "unfair". This basic economic model would therefore predict that increased child support enforcement should result in fewer divorces for couples who are likely to require AFDC/TANF assistance after divorce and either more or less divorces among those couples who are not likely to require assistance.

Understanding the relationship between nonmarital births and child support enforcement is similarly complicated by the fact that male and female incentives should work in opposite directions. While increased child support enforcement increases the father's costs of childbearing, at the same time, it decreases the mother's costs of single

parenthood. But of the competing concerns, whose is likely to dominate? A decrease in nonmarital births would only be likely to occur in those cases where the man has complete control over contraceptive decisions or where the increased child support enforcement has little impact on the woman's utility. While the former case may be unlikely, the latter is very likely when the mother will have to rely on welfare as a single parent. As Nixon (1997) points out, women likely to require welfare benefits could actually see a decline in their well-being as a result of increased child support enforcement. If men who would otherwise provide informal, under-the-table support, no longer do so because they have to make formal payments, the total support a woman receives would, in fact, decline. In this instance, both men and women would have an incentive to prevent a nonmarital birth.

Empirical Evidence for the Effects of Increased Child Support Enforcement

Unfortunately, there is much less research on the effects of child support enforcement than on the effects of welfare on family formation. In part, this is due to the fact that child support enforcement became a federal responsibility only in 1974.

Furthermore, the largest changes in child support policy have occurred even more recently. There are only two recent studies that have attempted to explore the possibility of a relationship between increased child support enforcement and divorce. One study (Nixon, 1997) uses state policies to proxy for the likelihood and level of child support a woman would receive if she divorces. The author finds a negative relationship between increased child support enforcement and divorce for families with children, and no relationship for families without. Because women without children are not eligible for child support, this finding provides some additional evidence that the policy parameters

are capturing real effects and not a spurious correlation. Estimating the models on subsamples of the population – those women who are more likely to require AFDC benefits in the event of a divorce—she finds even stronger negative effects. The latter result is most definitely consistent with the predictions of economic models while the former may or may not be. Recall that under typical utility assumptions, most models would predict that women not likely to receive welfare would be more likely to divorce. It is possible that the more impoverished subsample is driving the results and negating the positive response of other women. The author does not, however, attempt to determine whether women unlikely to receive welfare actually have a greater chance of divorce, so that question remains unanswered at present. Hoffman and Duncan (1995) attempt to capture variations in expected child support payments and find no effect at all. This study however, uses a sample of already divorced women to estimate the amount of child support a woman would receive if she were to divorce. In an environment with changing laws and procedures governing child support awards and amounts, this procedure is likely to introduce a good deal of measurement error which may account for the weak relationship they find between child support and divorce.

There are two studies that attempt to relate state level child support enforcement variables to nonmarital births. In an attempt to control for state level unobservables that may bias parameter estimates, state specific fixed effects are often introduced. In Garfinkel et al (2000) the authors find a significant relationship between some child support enforcement variables and state level nonmarital births. Their largest estimates imply that changes in child support enforcement were responsible for a 12% decline in nonmarital births over the period 1980-1996. Interestingly they found that changes in

child support were much more important than changes in welfare benefits over the same time period. Case (1998) also looks at state level rates of nonmarital childbearing, but attempts to control for the fact that cross state variation in child support policy may be endognenous by using an instrumental variables technique. In both studies, with the preferred model specification that attempts to control for state level unobservables, many of the parameter estimates increase in magnitude. This implies that the relationships are not in fact due to state level unobservables and may be causal. Moreover, the most precisely estimated coefficients are consistent with the predictions of economic theory. Policies that increase the costs of parenthood by making child support obligations higher appear to decrease nonmarital births at the state level so that the male incentives dominate. The existing evidence, though sparse, seems at present to be consistent with the predictions of economic theory in that increased child support enforcement seems to be negatively related to nonmarital births. The additional implication that women should respond differently to increased child support enforcement depending upon their expected welfare needs has not, at this point, been examined.

The Impact of Labor Market Opportunities

Theoretical Predictions

Finally, we turn to the effects of labor market opportunities on family formation. Most economic theories of marriage suggest that good employment opportunities for men strengthen marriage and poor employment opportunities weaken marriage. Becker extends the theory of comparative advantage to argue that specialization within marriage is optimal. Because fathers tend to specialize in income earning, an increase in their market wage will increase their gains from trade, and therefore stabilize marriage.¹⁴ But

these "price effects" are not the only possible source of marital gains. Financially, partners can act as an alternative source of credit. Think, for instance, of the woman who works to put her husband through medical school so that he has fewer high interest loan payments upon graduation ¹⁵. Similarly, spouses can act as a buffer to risk. If one partner becomes ill or unemployed, the other partner can help to make ends meet (Moffitt, 2000). Furthermore, so long as there are public (jointly consumed) goods, within marriage such as housing, the utility gains from marriage increase with income. These "income effects" mean that increased labor market opportunities for both men and women should stabilize marriage and decrease divorce. For men, both price and income effects should increase marriage so the total effect of increased labor market opportunities should be positive.

Increased labor market opportunities for females reduce their comparative advantage in the home and may reduce marriage. They also enable women to purchase more privacy and independence resulting in less marriage. On the other hand, just as for men, higher wages for women increase the other types of gains from marriage. For women, increased labor market opportunities have negative price effects -- resulting from decreased gains to specialization -- and positive income effects because they can help out financially and purchase more public goods. The total effect on marriage is ambiguous and depends on which effect is stronger.

Search models of marriage focus on the costs of continuing to search for a more perfect partner. Individuals have in a mind a minimally acceptable quality of match¹⁶. Potential matches that appear to be below the minimum are not accepted, and the individual continues searching. These models also take into account uncertainty at the

time of marriage regarding what the future outcomes of the marriage will be. For instance, women who encounter a young job entrant may not be as certain of his earning capacity as they are of a man who has worked for several years. Longer searches can decrease uncertainty and increase the chance of a high quality match. In these models, increased labor market opportunities make men more desirable partners, but also allow them to fund longer searches designed to increase the quality of a match. In search models, it is possible for improved labor market opportunities to lead to less marriage for both men and women because higher minimum standards will mean that a larger share will never encounter an acceptable match. But among those individuals who do find mates, it also predicts longer lasting matches and less divorce — an ambiguous total effect.

Finally, with respect to non-marital births, what Willis (1999) calls an "underclass equilibrium" may occur if there is a shortage of men and if women's incomes are high relative to men's. When this is the case, low income women may find that their best choice is to have children out of wedlock, and low income men will optimally decide to father children out of wedlock with several different partners. The assumption is that women who cannot find suitable mates are unable or unwilling to marry, but may nonetheless become parents and contribute to the rise in nonmarital childbearing. By increasing the supply of marriageable men, women will marry rather than choose lone parenthood. In this way employment opportunities for men should decrease nonmarital childbearing by making the marriage option more attractive. Similar to Becker's model of divorce, one implication is that greater employment or income opportunities will have asymmetric incentive effect for women and men. For women, greater opportunities will exacerbate the underlying problem – a shortage of "marriageable men" – and lead to

more nonmarital births. But this hinges on the assumption that marriage behavior is changing but fertility behavior is not. In other words, fertility decisions do not change as a result of new labor market opportunities. As Garfinkel, Gaylin, Huang, and McLanahan (2000) point out, better labor market opportunities for women should also decrease fertility. If fertility rates fall more than marriage rates, the result may, in fact, be a decline in nonmarital births even if women are choosing not to marry. Increasing the labor market opportunities of men will, however, lead to more "marriageable" men, and as a result of increased marriage, most models would predict fewer nonmarital births.

Empirical Evidence for the Effects of Labor Market Opportunities

Although their data are extremely limited and only use information on male earnings, Becker et al (1977) find that any shocks to income – positive or negative – increase the likelihood of divorce. The authors explain their results by suggesting that high incomes likely increase marriage, but, once married, any deviations from expectations leads to a higher probability of divorce. Consistent with a search model of marriage, this may imply that positive shocks resulting from new labor market opportunities may result in more marital instability because individuals who have higher than anticipated earnings may try their luck in the remarriage market.

The coincident increases in female labor supply and female-headship could imply that there is a relationship between female economic opportunities and divorce. Indeed, cross-sectional and time series studies indicate that higher female employment opportunities are associated with more nonmarriage (Blau et al, 2000) and higher female headship through divorce. It could also be the case, however, that divorced women need to work in order to support themselves and their children. This brings into question the

underlying causality (Haurin, 1989). In addition, women who believe they may divorce in the future are likely to want to invest in work experience "just in case" so the timing of work and divorce experiences is unlikely to disentangle the relationship (Peters, 1986; Johnson & Skinner, 1986).

Similar to what we observe in time trends, cross-sectional evidence regarding economic opportunities and divorce is usually consistent with theoretical predictions. While a good deal of studies demonstrate a positive relationship between female earnings and divorce, there are some interesting counterpoints that need to be considered. Underlining the importance of the economic gains to marriage, South (1991) demonstrates that men would prefer their wife be employed. Similarly, Mare and Winshop (1991) demonstrate that black women with high education and earnings are more desired by potential husbands. These indicators would seem to imply that either the gains from specialization are or have become small relative to the income gains. More consistent with the predominance of gains due to comparative advantage, van der Klaaw (1996) finds that higher female earnings and employment lead to increased divorce while higher male earnings have the opposite effect. Using the same data but a different model, Hoffman and Duncan (1995) find that both the husband's and the wife's earnings decrease the likelihood of divorce¹⁷.

Time series, cross sectional, and longitudinal analyses all find that poor male employment opportunities are associated with low marriage and high non-marital fertility. But causation flows not only from work to marriage but also from marriage to work, making it difficult to obtain unbiased estimates of the effects of employment opportunities on marriage. Furthermore, most studies indicate that changes in

employment rates account for only a small portion of the changes in marriage. On the other hand, Moffitt (2001) suggests that reductions in male wage rates account for a great deal of the increase in female headship among the low educated, but he stresses the importance of including both male and female wages, absolute and relative, in order to control, if only imperfectly, for both specialization and income effects (Moffitt, 2000).

Time trends in labor market opportunities, at least for black men, appear, at first glance, to explain some of the observed increase in female headed households due to increased nonmarital births. Wilson (1987; Wilson and Neckerman, 1986) shows that the trend in his "male marriageable pool index" (MMPI) – the ratio of the number of employed men to women who are of similar age and the same race – turned downward for young black men in the late 1960s through the early 1980s. This fall coincided with a rapid decline in marriage for these groups, and as a consequence, appears to be a strong candidate for explaining the rise in black, female headed households over that time period. In addition, Smith, Morgan, and Koropeckyj-Cox (1996) demonstrate that increases in the black nonmarital birth ratio between 1960 and 1992 were due almost entirely to changes in age-specific marital rates making the retreat from marriage an attractive explanation. Examining the time trends more closely, researchers have found some interesting issues that need to be addressed by proponents of this theory, however.

If a lack of economic opportunities is the driving force in the retreat from marriage, as Lerman (1988) points out, theorists are going to have to explain why college educated black men also show declines in marriage. Theories of an underclass equilibrium would predict either no change, or an increase in the marriage propensities of this "marriageable" group. Changing the focus from education to employment, Ellwood

and Crane (1990) find declines in marriage among employed as well as unemployed men. This kind of universal decline is not easily explained by the economic models presented above that assume higher quality men would continue to marry at the same or even higher rates.

Cross-sectional and longitudinal studies consistently find a relationship between employment status or earnings of males and family structure, particularly for black families. The estimated effects, however, usually explain only a very small portion of the change – 10% or smaller (White, 1979; Lichter, LeClere & McLaughlin, 1991; Llyod & South, 1996; Sampson, 1987; Brien 1997; Blau, Kahn and Woldfogel, 2000). Mare and Winship (1991) use both employment and earnings to predict marriage within the past year. Their study uses measures of both current employment and previous year's earnings. The findings stand out from many others in that they find declines in black male employment explain about 20% of the decline in marriage. Their study fails to address adequately a very important problem however. Earnings and marriage are likely to be linked. Married men earn more than unmarried men, but it is not clear that low earnings cause low marriage or that low marriage causes low earnings. Estimates of the relationship may be biased upwards if marriage makes men more productive. Most studies therefore do not control for the link between marriage and earnings and their small estimated impacts are likely to be overestimated. Wood (1995) uses a variety of models attempting to control for the link between marriage and earnings. He finds that there is a good deal of reverse causality, and that although income level provides a better indicator that the more traditional MMPI measure, less than 5% of the decline in marriage rates can be attributed to the decline in economic opportunities.

Olsen & Farkas (1990) use quasi-experimental data (labor market shocks generated by a social program to provide young men with work opportunities) to show that increased opportunities for black men increased the likelihood of partnering (but not marriage) and had negative effect on nonmarital childbearing. Neal (2000) estimates the expected spousal earnings for women and finds that expected spousal earnings are not associated with family structure for white women. For black women – those with the lowest education in particular -- increased expected spousal earnings appear to increase marriage and decrease nonmarital childbearing. The estimated impact of even an additional \$5000 per year on these rates is somewhat modest, but he mentions that it would reduce the differential in single motherhood between blacks and whites by over 10%. Conversely, South and Lloyd (1992) find that while mate availability has a small effect on the nonmarital fertility of whites and blacks, male unemployment, contrary to the predictions of the underclass equilibrium, reduces nonmarital fertility rates. Furthermore, they conclude that the bulk of the racial differences in nonmarital childbearing cannot be attributed to differences in their respective marriage markets. While it is an important factor, declines in employment opportunities for males, by reducing marriage, fail to explain the bulk of the increases in nonmarital births over the past few decades.

The relationship between economic opportunities for women and nonmarital childbearing is more complicated, however. Better opportunities allow women to opt out of marriage, but research also shows that better opportunities and expectations of opportunities reduce the desire to have a nonmarital birth. Empirical work provides support for both of these countervailing effects.

Moffitt (2000) compares time trends in wages, relative wages and marriage by race, cohort, and education level. His analysis shows that for more educated, white couples, the income effect (measured as total income) seems to have dominated marriage incentives while for less educated women, the declines from reduced comparative advantage (measured as the ratio of male to female incomes) appear to be most important. That is, higher wages for white women led to more marriage among the highly educated and less marriage among the less educated. Although, similar to white women, increased wages among less educated black women, decreases in comparative advantage appear to have dominated resulting in less marriage, neither changes in comparative advantage nor income effects can explain changes in marriage patterns among highly educated black women.

Examining employment opportunities for black females, Hoffman and Duncan (1990) find that increasing expected age-26 income by 25% would modestly reduce teenage childbearing (a 2 percentage point deduction in the proportion of teen births). More importantly, they report that if "black women could translate their backgrounds into age-26 incomes in the same way as white women,the incidence of AFDC-related births would fall by one-fifth". Such an impressive reduction in AFDC related births would require closing a substantial white-black earnings gap and would imply a 75% increase in mean age-26 income for black women. More realistic changes in earnings opportunities would nevertheless result in substantially fewer AFDC-related births, the role of employment opportunities for women may be worth further investigation.

Conclusion

Economists generally assume that father investments of time and money in their children will improve child outcomes. Economic theory predicts that marriage promotes these kinds of father-child involvement. Fathers who live apart from their children incur greater costs than resident fathers when sharing income or time with the child. The cost of housing a child or spending an hour or two with the child is much lower if the child and father live in the same household.

Economic theory also predicts that welfare programs like AFDC/TANF that are ^{1,2,3,...}limited to unmarried parents and/or are steeply income tested will discourage marriage. More universal programs like child allowances, or the EITC, may encourage or discourage marriage. Child support enforcement may either discourage or encourage divorce amongst families who would not be reliant on welfare, but is likely to discourage divorce and non-marital births amongst families who would be reliant on welfare. Increases in labor market opportunities for men promote marriage, while increases in labor market opportunities for women may either promote or discourage marriage.

Although there are some empirical studies that are inconsistent with these predictions and although there are shortcomings to even the best studies, on the whole, empirical research confirms the predictions. Fathers who live with their children invest substantially more time and money in their children than do nonresident fathers. High AFDC/TANF benefits are associated with more divorce, and although the evidence remains weak and questions remain unanswered, with more non-marital births. Strong child support enforcement deters divorce and non-marital births. Higher wages and greater employment for males are associated with higher marriage rates. Greater

employment of women is associated with more divorce, but the effects of wage rates are more ambiguous and appear to differ by education and race.

Most studies find that the effects of welfare, or child support, or labor market opportunities are, by themselves, small. None of these factors has changed enough to fully account for the large changes in US family structure. Researchers may yet demonstrate, however, that, taken together, changes in all of these factors explain a large proportion of the change.

¹ Agreements made within marriage are considered to be self-enforcing because proximity allows monitoring and because the relationship is assumed to be one based on trust and cooperation.

- ³ Rosensweig and Neal extend the basic model to allow for three choices for unmarried mothers—no child, child within marriage, child outside marriage.
- ⁴ As Becker et al (1977) and Peters (1986) discuss, this is simply an application of the Coase theorem and requires the assumption that couples can bargain at a zero or small cost.
- ⁵ There should be no change in expected happiness outside of marriage for women who do not expect to receive benefits unless the presence of welfare benefits carries an insurance value for those women who are unlikely to require aid. Although they do not expect to require assistance, they feel better knowing that there is a safety net.
- ⁶ When welfare benefits are restricted, marriage becomes a better option for some women who are likely to require welfare. The difference in well-being between the marriage state and the best possible non-marriage state represents what economists call a "quasi-rent". Spouses in this example husbands -- who recognize that their partner is benefiting from a quasi-rent can threaten divorce and extract the quasi-rents from their wives. The result of such opportunistic behavior would be a renegotiation of marital payoffs in favor of the husband.
- ⁷ Although Nixon does include AFDC benefits in her model, her focus is on child support enforcement rather than welfare benefits. When she estimates the models on sub-samples more likely to receive benefits, she only presents the coefficients for her variables of interest.
- ⁸ Because white women are less likely to end up on welfare than nonwhite women, this result is often explained by difference in sample size. Most datasets have far more observations for white women so any effects are more likely to be estimated precisely in the larger sample.

² There have, however, been some fairly recent attempts which show that if the interactions are repeated, a cost-sharing agreement may be viable even among non coresident spouses (Flinn, 2000)

⁹ Unlike most other cross-sectional studies presented here, this study does not measure cross sectional variation in benefits at one point in time, but instead, differences in AFDC trends across space and time are the source of variation.

- ¹⁰ Similar to previous studies, however, when Rosenzweig estimates his model for black and white populations separately, the welfare coefficient for the black sample has a counter-intuitive, negative sign implying that high welfare benefit profiles are associated with a reduced probability of nonmarital births.
- ¹¹ Except for the state of Wisconsin, changes brought forth under TANF are similar in their "taxing" of child support benefits and often leave the mother with even less than the first \$50.
- ¹² Nixon (1997) also takes into account over and under the table child support payments. If increased child support enforcement causes men to substitute over-the-table payments for what they were previously paying under the table, it is women on AFDC who will be made worse off because they will lose that income. The end result is the same increased child support enforcement results in fewer efficient divorces among couples where the woman is likely to require AFDC assistance, but this time it is because the woman is made worse off.

¹³ This follows from the assumption of declining marginal utility of income.

¹⁴ Becker also shows that an unexpected high or low wage will increase divorce. Once married, increased labor market opportunities, if unexpected, may make the option of remarriage seem more attractive. Men or women who find themselves (their partners) with improved (weakened) labor market opportunities or higher (lower) than expected wages may feel that they want to exit from the current marriage and attempt to make a better match because they have experienced outcomes which are likely to be better than anticipated when the original marriage was contracted.

¹⁵ This would represent a gain to marriage if we assume that there are imperfect credit markets. Assuming that partners have more information about the quality of the loan, this is not an unreasonable assumption.

¹⁶ Although most people acknowledge that there are a variety of factors that people consider when choosing a mate, few characteristics can be easily and accurately measured. For this reason, empirical estimates of search models frequently focus on female searches and use the man's earnings as a measure of quality.

¹⁷ The wife's wage coefficient becomes insignificant in the full model specification, however.